GLOBAL ENVIRONMENT FACILITY
EVALUATION OFFICE

GEF Evaluation Office / UNDP Evaluation Office

IMPACT EVALUATION OF GEF / UNDP SUPPORT TO PROTECTED AREAS AND PROTECTED AREA SYSTEMS

Biodiversity Impact Evaluation Approach Paper for Stakeholder Consultations

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I. Background

1. The Global Environment Facility (GEF) has been the major international source of financial and technical support to countries seeking to conserve their biological diversity and use their biological resources in a sustainable manner. The GEF Secretariat reports that the GEF has carried out more than 1000 biodiversity projects in over 150 countries since its establishment in 1991. In collaboration with several of its implementing agencies, notably the United Nations Development Programme (UNDP) and the World Bank, the GEF has been especially active in supporting the establishment and effective management of protected areas as a key tool in biodiversity management. To date, the GEF Secretariat report that GEF has supported projects involving 2809 protected areas, covering over 700 million hectares. This support amounts to more than US$ 2.2 billion in grants, leveraging an additional $5.5 billion in co-financing from project partners (GEF, 2012).

2. The United Nations Development Programme (UNDP) has been an implementing partner of the GEF since its inception in 1991, and has been the lead implementing agency in 50 percent of GEF biodiversity projects[1]. UNDP collaborates with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. The portfolio of biodiversity and ecosystems projects managed by UNDP is the largest in the UN system. UNDP currently works in 146 countries on biodiversity, managing 512 projects on ecosystems and biodiversity with US$ 1.5 billion in funding from the GEF and other sources, and co-financing of US$ 3.5 billion. GEF funding constitutes the single largest earmarked source of income for UNDP, contributing approximately $286 million per year, 50 percent of the UNDP budget for environmental programming and projects. As part of its GEF implementation responsibilities, UNDP administers the Small Grants Programme (SGP) for the GEF, which is implemented in about 100 countries. The small grant effort sponsors local government and civil society activities with grants of up to $50,000 to tackle local environmental and natural resource management problems.

3. Protected areas are intimately related to their surroundings, with much of their relative success or failure depending on multiple variables that are beyond the control, or even influence, of the protected area management authority. Project sites are likely to be influenced by external changes such as climate, natural disasters, politics, corruption, resource extraction, food security, civil unrest, economics, demographics, and other variables that make it difficult to isolate the contribution of GEF and its partners from the many other influences affecting any given protected area or landscape. The GEF has also invested in production landscapes around protected areas, thereby helping to reduce pressures on the protected areas by providing economic and social benefits to surrounding communities. This integration of the management of protected areas and their surrounding lands can provide benefits to both biodiversity and

[1] Based on GEF Project Management Information System (PMIS) data downloaded on 28 May 2013 covering biodiversity projects approved, under implementation and completed. The rest of the projects have been implemented by the World Bank (25%), UNEP (20%) and other agencies (5%).

human well-being (Miller et al. 2012). Many lessons that have been learned from this experience are being applied more broadly, including engaging local stakeholders in many of the major protected area issues affecting biodiversity (GEF EO 2006; UNDP 2009; Ervin, et al. 2010). In addition to improving human well-being, GEF projects, by design, are expected to provide additional support for contributing to agreed global environmental benefits, specifically biodiversity in the case of protected areas. Further, the GEF contribution is intended to be catalytic, making it an integral part of a larger effort that includes many stakeholders (local people, government agencies, the private sector, civil society organizations, etc.).

4. This evaluation will assess the impact of GEF/UNDP investments in terrestrial protected areas and protected area systems, especially seeking evidence from countries or landscapes where the supported areas can be compared with those lacking such support, or receiving other types of intervention. This evaluation will understand by impact as the positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. The evaluation will analyse how different management and governance approaches, in particular the extent of community engagement, impact on the achievement of GEF objectives in protected areas. The evaluation seeks to provide insights into how future interventions and support can best contribute to the sustainable management of protected areas as a contribution to the conservation and sustainable use of biodiversity. It will also assess the extent to which support has promoted human well-being as a necessary condition for the effective management of protected areas and immediately adjacent landscapes, and the factors and conditions affecting the interaction between human livelihood objectives and biodiversity objectives.

5. The evaluation will adopt a mixed-methods approach and will assess qualitative and quantitative evidence to determine the extent of GEF/UNDP contributions, particularly in facilitating the creation of conditions that will lead to better conservation of biodiversity within and adjacent to protected areas in developing countries. The evaluation will also determine the most important types of interventions and the factors that contribute to or hinder progress in managing protected areas.

6. Given the consistency of the GEF approach to PAs over time (see OPS5 TD3 Implementation of GEF Focal Area Strategies, available at www.gefeo.org), the evaluation will provide information referring to progress made by completed or currently implemented projects towards the latest GEF Strategy Objectives. More specifically, the evaluation will examine the extent to which GEF support has contributed to the GEF-5 Biodiversity Strategy Objective One of improving the sustainability of PA systems, such as through sustainable financing mechanisms for biodiversity conservation and improved management systems in protected areas. The evaluation will also seek to examine the extent to which GEF support has helped influence the sustainable management of landscapes immediately adjacent to these protected areas, as well as the extent to which GEF support has contributed to the incorporation of biodiversity conservation and sustainable-use principles in policy and regulatory frameworks (see Annex 1). It will especially look at how impacts of support to

protected areas on human well-being have affected the achievement of conservation objectives.

II. Joint Evaluation

7. The GEF EO and the UNDP EO will undertake a joint impact evaluation of the GEF/UNDP support to protected areas and protected area systems. From the GEF EO perspective, this impact evaluation fits within an ongoing set of impact evaluations covering each of its focal areas, and it will provide an important set of findings for the GEF 5th overall performance study. For the UNDP EO, this constitutes the first in a set of impact evaluations of UNDP programming, and builds on the findings and conclusions of a recent thematic evaluation focused on the nexus of issues linking UNDP poverty and environmental protection support to countries.

Addressing Potential Conflict of Interest

8. The GEF Evaluation Office has as its overall objective to ensure the evaluation function within the GEF. It also sets minimum requirements for evaluation across the GEF system, and ensures that the evaluative evidence is properly shared within the GEF partnership. The Office reports directly to the GEF Council and it is independent of World Bank management and GEF management. The UNDP Evaluation Office is the independent custodian of the evaluation function for UNDP and reports to the UNDP Executive Board. The Evaluation Office contributes to informed decision-making by the Executive Board, managing for development results by the organization, and enhancing the evaluation function across the UN system by engaging with partners in the evaluation and development community. The independence of these two offices precludes any general conflict of interest. In addition both offices adhere to codes of conduct that deal with conflict of interest issues and to evaluation policies in which conflict of interest issues are tackled.

9. Three additional measures have been taken to prevent more specific conflicts of interests. First, the two evaluation offices have jointly hired one team that will carry out most of the evaluation tasks and will respond to the joint team managing the evaluation. Separate reports will be drafted by the evaluation team to be used by each of the evaluation offices as inputs to their own independent reports. As the evaluation will consist of several reports, also when deemed appropriate the two evaluation offices will collaborate in the drafting of joint reports. Second, a Technical Advisory Group (or TAG; see section on Execution Structure) has been established in which other GEF agency evaluation offices are represented. Third: at no time will UNDP EO staff evaluate projects in which UNDP is not involved, and at no time will GEF EO staff evaluate UNDP projects in which the GEF is not involved[2].

[2] This is similar to the way the GEF EO has so far undertaken parallel country-level evaluations with the World Bank IEG in Peru, and with UNDP EO in El Salvador, Jamaica and Timor Leste.

Joint Implementation

10. The joint impact evaluation will take place in two phases. The first phase, which will be implemented from February to August of 2013, will give particular attention to the assessment of biodiversity conservation in protected areas through changes in biodiversity parameters. The findings of the first phase will be included in the GEF Fifth Overall Performance Study.

11. The second phase will run from September 2013 to June 2014, and will assess the conditions contributing to progress towards better biodiversity management. This phase will also examine the conditions and extent to which sustainable livelihoods contribute to biodiversity conservation, and the extent to which GEF/UNDP-supported protected areas have contributed to socioeconomic impacts (positive and negative) on communities living in and adjacent to protected areas, thus assessing the nexus between poverty and environment. In addition, this phase will involve a more detailed analysis of GEF's specific contributions to impact through a series of field case studies. The findings of the second phase will be presented to the UNDP Executive Board and will be included in the GEF Evaluation Office Annual Impact Report to the GEF Council. The evaluation will also outline a follow-up phase designed to develop metrics and methods to assess impacts on biodiversity.

III. Evaluation Objective and Key Questions

12. This evaluation has as its main objective to assess the impact of GEF/UNDP support to biodiversity conservation through support to protected areas and protected area systems. It will evaluate the extent to which GEF strategies, programs and interventions have been able to enhance species and habitat protection and restoration. The evaluation will focus on interventions that are in line with GEF 5 Biodiversity Strategy Objective 1 to improve the sustainability of protected area systems.

13. The projects under review are either completed or under implementation for at least five years, and were therefore designed prior to the establishment of the GEF 5 Biodiversity Strategies. Continuity of GEF support and the over-all developments in the field, however, are likely to have resulted in progress supporting the GEF 5 Biodiversity Strategy Objective. This evaluation will thus specifically seek to identify the long-term contributions of GEF projects to achieving impact in the context of this objective, as outlined above. In this way, the evaluation will assess the extent to which key elements of GEF 5 Biodiversity Strategy Objective 1 (see Annex 1) that have been implemented in previous projects are significantly contributing to the achievement of impact, and would be critical for future strategies. Socioeconomic impacts of GEF-supported approaches and interventions will also be assessed within the context of how these have affected the achievement of the first objective in the projects under review.

14. The evaluation will seek to answer three main questions:

1) What have been the impacts and contributions of GEF/UNDP support (positive or negative, intended or unintended) in biodiversity conservation in protected areas and their immediately adjacent landscapes?

2) What have been the contributions of GEF/UNDP support to the broader adoption of biodiversity management measures at the country level through protected areas and protected area systems, and what are the key factors at play?

3) Which GEF-supported approaches and contextual conditions, especially those affecting human well-being, are most significant in enabling and hindering the achievement of biodiversity management objectives in protected areas and their immediately adjacent landscapes?

IV. Protected Areas as a Tool for Biodiversity Conservation

15. Protected areas arguably have been the most successful means of conserving many of the components of biodiversity, particularly rare species and intact ecosystems, and are a critical component of the Convention on Biological Diversity (see Annex 2). Countries have a protected area system established by national and state governments, and increasingly by indigenous communities and private land holders. At the time of the Fourth World Parks Congress held in Caracas, Venezuela, in October 1992 (at the beginning of the GEF), protected areas covered about four percent of the globe. Today, the UNEP World Conservation Monitoring Centre has recorded over 200,000 protected areas, covering about 13.2 percent of the Earth's terrestrial surface.

16. Protected areas contribute to virtually all ecosystem services, with the degree of their contribution varying widely with their size, location, and geography. The contribution of ecosystem services provided by protected areas to human well-being has been well illustrated by national regional and local studies, with watershed protection as an outstanding example; for example, 33 of the 105 largest cities in the world depend to a significant extent on protected areas for their water supply (Dudley and Stolton, 2003) and financial support for these protected areas is justified in part by their role in providing clean water to urban areas. Many other protected areas provide similar services to nearby villages, farms, and reservoirs, illustrating the intimate relationship between water and protected areas.

17. However, even as more protected areas are created, others are converted to alternative uses or reduced in size (Mascia and Pailler 2011). Some of the most important protected areas are losing significant populations of the species they were established to protect. For example, an index based on a database of 583 population time series for 69 species of large mammals in 78 African protected areas revealed on average a 59% decline in population abundance between 1970 and 2005 (Craigie et al. 2010), though with considerable variability among sites. In a recent review of the effectiveness of protected areas, Geldmann et al. (2013) found that

PAs have conserved forest habitat. However, the evidence was inconclusive that PAs have been effective at maintaining species populations, although more positive than negative results are reported in the literature. Over-all, available evidence suggests that PAs deliver positive outcomes, but there remains a limited evidence base, and weak understanding of the conditions under which PAs succeed or fail to deliver management outcomes.

18. On a more positive note, the local extinction rate (extirpation) of 18 of 25 large mammal species assessed in India was lower in protected areas than outside them (Karanth et al. 2010). The common conclusion from these studies is that protected areas work when there is a reasonable level of management effectiveness, which is where the GEF can make a contribution.

19. Many protected areas established to conserve tropical forests continue to suffer from deforestation, mostly illegal (Laurance et al., 2012), although deforestation has been found on average to occur less in multi-use protected areas[3] than in strictly protected areas[4] (Nelson and Chomitz, 2009). Maintained forest cover does not necessarily mean that biodiversity is being conserved, however, as unsustainable collection of forest products (game meat, medicinal plants, fruits, etc.) may continue even if the forest remains essentially intact (Wilkie et al., 2011).

Role of People in Protected Areas

20. The expansion of protected area coverage in the face of multiple challenges has been accompanied by substantial changes in the way protected areas are managed. The classic "Yellowstone" approach to national parks essentially sought to exclude resident people and was widely adopted as the standard for protected areas. This pattern has been widely repeated in many parts of the world, sometimes leading to political and civil conflicts (Brandon, et al., 1998). Even today, some biologists support the view that strict protection is the only way to save wildlife (e.g., Terborgh, 2004; Estes et al., 2011).

21. In the early 1970s, it was increasingly recognized that indigenous and local people had historical claims to virtually all land or the resources it supported, even if formal ownership or access rights were not always recognized by government). If protected areas were to be established without conflict, then traditional rights holders would need to be involved in the process. The evidence from tropical forest areas suggests that such stakeholder involvement can lead to more effective management of biodiversity, at least in some cases (Bertzky et al., 2012), though Terborgh (2004) and other colleagues argue the counterfactual. As more land has been devoted to protected areas over the last few decades, social scientists have presented more evidence that local people can often be powerful agents for conservation under the proper conditions (see, for example, Pilgrim and Pretty, 2010 and Maffi, 2001). Recognizing the utility of a variety of approaches to the management of protected areas, the International

[3] IUCN Categories V and VI, see Annex 1 for a description of IUCN categories.
[4] IUCN Categories I and II

Union for Conservation of Nature (IUCN) developed a system of protected area categories in 1978. Several decades of experience led to a somewhat revised system released in 2008 (Dudley et al.) that is now widely adopted (Annex 2).

22. In 2010, the 10th Conference of Parties of the CBD approved a new Strategic Plan for 2011-2020, which included a set of twenty targets, known as the Aichi Biodiversity Targets. Target 11 is directly linked to protected areas being part of larger, multiple-use management systems, stating that "By 2020, at least 17 percent of terrestrial and inland water areas and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape." With over half of the Aichi Targets relating to protected areas, the Parties to the CBD clearly consider this form of land management to be making a significant contribution to human well-being, when the protected areas are properly managed and integrated into regional and national development programs[5].

23. The current approach to sustainable management of protected areas gives much greater attention to working with the people who live in and around the protected areas, especially where poverty is an important issue. Further attention has been given more recently to the relationship between human livelihoods and protected areas, especially because many protected areas are located in remote areas where poverty is endemic (see, for example, Andam et al. 2010; Thomas, 2011; PNAS, 2011). Ervin et al. (2010), drawing from experience from the UNDP/GEF protected areas portfolio, recognized that local people can contribute to the formulation of policies affecting many ecosystem services that are provided by protected areas, identify the potential options for enabling ecosystem services to contribute to sustainable livelihoods, agree on appropriate guidelines for sustainable use (and thereby reduce poaching), participate in access- and benefit-sharing schemes, and help develop ways of

[5] Many of the other Aichi Targets also relate to protected areas. Examples include Targets 1 (people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably), 2 (biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting and reporting systems), 5 (the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced), 8 (pollution has been brought to levels that are not detrimental to ecosystem function and biodiversity), 9 (invasive alien species are controlled or eradicated and measures are in place to prevent their introduction and establishment), 12 (the extinction of threatened species has been prevented and their conservation status has been improved and sustained), 14 (ecosystems that provide essential services are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable), 18 (the traditional knowledge, innovations, and practices of indigenous and local communities for the conservation and sustainable use of biodiversity are fully integrated and reflected in the implementation of the CBD), 19 (the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied), and 20 (financial resources for implementing the Strategic Plan should increase substantially from the current levels).

dealing with species that may cause problems (involving large predators such as tigers and major crop raiders such as elephants).

24. A key assumption in many of the recent approaches to biodiversity conservation is that answering such questions through dialogue with people living in and around protected areas can build a stronger positive link between protected areas and efforts to alleviate poverty. Building this link is both practical and ethical. In practical terms, protected areas where poverty is an important issue are likely to be most successful when they include a viable land-use option that makes a significant contribution to sustainable development. On ethical grounds, human rights and aspirations need to be incorporated into national and global conservation strategies if social justice is to be realized (Scherl et al., 2004).

25. The Secretariat of the CBD has proposed a draft set of poverty-biodiversity indicators, along with ways of applying them (UNEP, 2012c), and many of these can be applied to protected areas. These indicators still need more work before they can be widely applied, but they do show the importance of the relationship between poverty and biodiversity, with protected areas considered a key method for conserving biodiversity. Given that protected areas tend to be in areas that are remote from modern developments and populated by small farmers, it is not surprising that the recent growth in the number and extent of protected areas has come in the IUCN Categories where local communities are significantly involved in site management (Categories V and VI)(Bertzky et al., 2012).

26. In 2006, the GEF EO produced a report (GEF EO 2006) that addressed precisely this interaction and concluded that, in instances in which biodiversity and human livelihood objectives were compatible, progress in biodiversity conservation was more robust. It also found that in several instances trade-offs between biodiversity and human livelihood objectives took place. In 2010, the UNDP EO evaluated the UNDP contribution to environmental management for poverty reduction. The evaluation concluded that addressing the poverty-environment nexus is essential to achieving the UNDP mission. It noted that poor people depend disproportionately on access to natural resources for their livelihoods, and development and poverty reduction programs have significant effects on the environment. It notes that the UNDP strategic plan draws attention to urgent challenges facing poor communities stemming from climate change and notes that land degradation and loss of biodiversity pose serious challenges to poverty alleviation (UNDP EO, 2010). The results of the evaluation have encouraged UNDP to incorporate ecosystem services into its advice to countries preparing poverty alleviation strategies.

V. GEF/UNDP Support to Protected Areas

27. The foundation for GEF support to protected areas is clearly stated in Article 8 of the CBD (see Annex 3). The 2004 Biodiversity Program Study indicated that 75% of GEF biodiversity projects since the Pilot Phase in 1991 included some protected area elements (GEF EO 2004).

The Operational Programs (OPs) developed in 1995-1996 were explicit about GEF support being closely linked to the relevant conventions, with the Convention on Biological Diversity as the most relevant for this Evaluation. For biodiversity, five general approaches were specified: long-term protection; sustainable use; addressing underlying causes and policies; stakeholder involvement; and targeted research. Protected areas were addressed primarily under the first approach--long-term protection--including investments that were aimed at:

- Demarcating, gazetting, strengthening, and expanding protected areas;
- Establishing long-term funding mechanisms, including trust funds, to ensure provision of recurrent costs;
- Developing integrated conservation and development projects around protected areas;
- Creating participatory schemes for natural resource management, including that in buffer zones, by local communities, indigenous groups, and other sectors of society, consistent with biodiversity and sustainable use;
- Developing demonstration projects linked to alternative livelihoods for local and indigenous communities; and
- Applying technologies (such as geographic information systems) for biological inventorying, rapid assessment, impact measurement, and gap analysis in integrated planning and management of designated protected areas.

28. The Strategic Priorities for Biodiversity for GEF 3 had an explicit focus on protected areas representing a range of ecosystem types, or biomes. GEF 5 Biodiversity Focal Area Strategy Objectives have evolved with the latest CBD strategies to, among others, focus more on improving the sustainability of protected area systems rather than just establishing or supporting individual protected areas (GEF EO 2012b). GEF 5 Biodiversity Focal Area Strategy also includes mainstreaming biodiversity conservation and sustainable use into production landscapes, seascapes and other sectors.

29. The UNDP approach to achieving poverty alleviation through environmental protection was expanded in the UNDP strategic plan (2008-2011, extended until 2013) by emphasizing that "the UNDP goal in the area of environment and energy is to strengthen national capacity to manage the environment in a sustainable manner while ensuring adequate protection of the poor". A UNDP EO 2010 evaluation, however, showed that the articulation of this poverty-environment nexus as practiced throughout UNDP is somewhat haphazard and partial. At the field level, the linkages are generally understood to mean taking account of poverty issues in environmental work. The imperative to take on environmental concerns in poverty work is rarely grasped. The majority of UNDP projects that take account of the nexus are funded by the GEF, including SGP projects. UNDP indicates that it has helped to establish over 2,000 protected areas in 85 countries, covering 272 million hectares.

VI. Evaluation Methodology

30. Broadly speaking, the evaluation should gauge the extent that countries have been able to conserve and sustainably use biodiversity and maintain ecosystems goods and services through protected areas and protected area systems with GEF support. This is no easy task, as the body of evidence for GEF's biodiversity work is vast, covering more than 1000 projects in over 150 countries since 1991, with half of these implemented by UNDP. A significant challenge in developing this evaluation is therefore be to set an appropriate scope, so that findings are specific enough to be meaningful, yet representative enough to have relevance across the global reach of GEF/ UNDP work in this sector. This evaluation will focus on terrestrial protected areas and protected area systems, as there is a greater body of available and reliable data worldwide with which to assess changes in biodiversity parameters over the long-term[6].

31. Assessing the impact of interventions also presents evaluative challenges related to causal chains interacting across geographic scales, differences in time scales between the implementation of GEF-supported interventions and the corresponding changes in human behavior and natural systems, and mismatches in the geographical scales of interacting natural and human systems. To address these challenges, this evaluation will follow a theory of change approach to establish a causal link between the interventions supported, and the observed progress in biodiversity management.

A. A theory-based approach

32. A theory-based evaluation designs its questions around an intervention's "theory of change" (TOC), or the logic of how the intervention is expected to lead to the desired impacts (Fitz-Gibbon and Morris 1996, Weiss 1972). An intervention's theory of change may have been made explicit when the intervention was designed; sometimes it is implicit, which requires the evaluators to reconstruct it and make it explicit.

33. Within the context of the evaluation of GEF interventions, Van den Berg and Todd (2011) emphasize the need to go beyond project boundaries to assess how GEF has made an impact in the larger scheme of things, and to identify both positive and negative unintended consequences of GEF-supported interventions. The GEF Evaluation Office has developed a "Review of Outcomes to Impacts" (ROtI) approach to track progress towards impact and underlying factors.

34. The GEF Evaluation Office has developed a general framework for GEF's theory of change (TOC) as part of the *Impact Evaluation of GEF Support to International Waters in the South China Sea and Adjacent Areas*. This General Frameworkwas used to assess Objective 1 of the

[6] Assessing biodiversity protection impacts in marine protected areas is also important, and was done as part of the Impact Evaluation of GEF Support to International Waters in the South China Sea and Adjacent Areas. This has allowed the GEF EO to identify the critical factors that contribute to and hinder the achievement of impact in coastal and marine ecosystems.

GEF 5 biodiversity focal area strategy in the Focal Area Strategies Evaluation[7] and is currently being used by other impact evaluations carried out by the office. . For this evaluation, the biodiversity-specific frameworks for the GEF TOC will be used as tools to generate and test hypotheses that will help understand the causal pathways to global environmental benefits. It will be used to assess achievements of impact and progress towards impact, and to track processes that lead to progress towards impact. While acknowledging that the projects under review were approved prior to GEF5, this evaluation will also assess the extent to which these projects contribute to Objective 1 of the GEF 5 Biodiversity Focal Area Strategy through key elements of Objective 1 that were implemented prior to GEF 5.

35. The TOC framework presented in Annex 4 provides a tool to analyze how GEF provides support for activities that directly or indirectly address drivers that are expected to affect the management of biodiversity. When considering their intended results, GEF typically finances activities that may be classified into four categories: implementation strategies, institutional capacity development, knowledge and information, and the broader adoption of these previous three types of activities. Outputs and outcomes of GEF activities, and their interactions with their contextual environment and actions by other actors, are expected to lead to broader adoption of the promoted approaches and technologies by governments and other stakeholders, and to institutional action and behavioral change.

36. UNDP has not articulated a specific Theory of Change per se, for its biodiversity work, however it has sought to emphasize its value-added proposition in biodiversity management through its capacity to mainstream, or integrate biodiversity into other development imperatives. UNDP indicates that 'its coordination role in the UN system, its multifaceted mandate and its extensive presence at the national level are combined with a participatory approach that ensures national ownership of country programs of work, and hands-on action to develop the capacity of government and civil society partners'.[8] Integrated programming at the country-level through UN Country Teams sets common goals, and links work on biodiversity and ecosystems with issues of poverty, governance and crisis prevention. This cross-sectoral approach supports synergies across the four focus areas and the delivery of multiple benefits, and promotes resilience, sustainability and inclusive growth.

37. The 2010 evaluation of UNDP's contribution to environmental management for poverty reduction (the poverty-environment nexus) provided an assessment of the extent to which UNDP's multifaceted mandate and country presence had been successful in building synergies across environmental and human development issues. The poverty-environment nexus will be used to provide a basis for understanding and developing hypotheses on how UNDP is meant to achieve its desired impact.

[7] http://www.thegef.org/gef/Focal%20Areas%20Evaluation%20-%20Thematic%3A%20Focal%20Area%20Strategies
[8] The Future We Want. Biodiversity and Ecosystems – Driving Sustainable Development. Biodiversity and Ecosystems Global Framework 21012-2020

B. Assessing the impacts of support to biodiversity conservation through protected areas

38. As with all impact studies that involve complex political, social and environmental systems, there will be attribution difficulties when trying to gauge whether GEF support has led to a given (positive or negative) impact. Impact evaluation may involve setting a counterfactual, for instance a control group with similar features but without benefit of the support provided to the group under study. The evaluation will seek verifiable documentation of the links between environmental and socioeconomic changes in protected areas with GEF/UNDP-supported activities. It will assess the impact of support in biodiversity by using quasi-experimental methods and by drawing on the results of research published in the scientific literature and relevant databases on biodiversity (such as the UNEP/WCMC World Database on Protected Areas, the IUCN Red List, the list of Important Bird Areas, Alliance for Zero Extinction sites, and others). This analysis will include all GEF projects on protected areas and protected area systems that meet two main criteria: 1) they are completed or have been implemented for at least five years, and 2) reliable data is available from before, during, and after GEF support.

39. The GEF and UNDP evaluation offices will collaborate with the WCPA-SSC Joint Task Force on Biodiversity and Protected Areas of the IUCN, which is carrying out a global study on PA effectiveness. The Joint Task Force has compiled the most complete datasets on biodiversity metrics in protected areas. This includes databases on PA species population time series, contextual variables, and management effectiveness tracking. A preliminary assessment of the data sets compiled by the Joint Task Force indicates that of the 193 completed GEF biodiversity projects (up to FY 2011) and projects under implementation for at least five years for which supported PAs could be matched with WDPA IDs, time-series WDPA data on biodiversity outcomes are available for 65 GEF-supported PAs. Other databases such as the IUCN Red List, Living Planet Index, Global Biodiversity Values Assessment, and those which draw on remote sensing technology could allow cross-referencing with this dataset. A detailed analysis of project goals against biodiversity outcomes will be conducted for every site where time-series data is available to initially establish causal links between GEF support and changes in biodiversity trends and management effectiveness. While assessing impact, the evaluation will focus on changes in ecological trends. Attention will be given not only to instances in which biodiversity has improved but also to changes in the rate of biodiversity loss or habitat destruction. This analysis will have three stages.

40. The first stage of this analysis, which aims to provide inputs to the 6th replenishment of the GEF through the final OPS5 report, will focus on assessing biodiversity parameters before and after GEF support took place and on assessing causality chains between the objectives and outcomes of GEF projects and changes in biodiversity parameters in specific protected areas. More specifically, this stage will consist of the following steps:

a. **Compare trends in biodiversity outcomes (time-series) at GEF sites before and after GEF intervention occurred**. For each project where data is available, the evaluation will ensure that comparisons are valid for the project by subjecting each comparison to a set

of screening criteria, based on a) timing and b) match of objectives, intervention and species. There is the potential to increase sample size by augmenting data at some sites which currently only have data from before GEF intervention, by attempting to also get data for post-GEF intervention. Augmentation would be done by literature reviews and direct follow-up of sites and researchers likely to have data. Initially, the 35 projects, 50 sites and 52 time series for which potential overlap has already been identified will be examined. The number of matches will be increased as much as possible by augmentation, including through data from the Laurance et al. database for tropical protected areas.

b. **Compare Management Effectiveness Evaluations before and after GEF intervention occurred.** For this analysis the evaluation will compare scores from the management effectiveness tracking tool (METT, see text box) before and after project implementation. In each case, factors influencing the increase or decrease in the scores will be examined to clarify the causes. For all cases, the evaluation will ensure that comparisons are valid for the project by subjecting each comparison to a set of screening criteria, based on a) timing and b) match of objectives, intervention and species. Where information is lacking or unclear, additional literature reviews and telephone interviews with relevant parties who worked on the project will be conducted. The temporal matching exercise for the METT data will also be repeated for some areas to include additional METT data from the GEF as they become available.

c. **Assess reliability of METT to predict biodiversity outcomes**. A meta-analysis of the first two approaches will be conducted to summarize the distribution of rates of success for each project where data exists. Measuring protected area management effectiveness will require a background in current protected area management approaches, current forms of international support, and how management effectiveness is measured: first quantifying inputs into management; and second, quantifying the ecological outcomes of the management inputs. The evaluation will compare and contrast the analysis of project success against qualitative assessments done in terminal evaluations. Where differences exist, examination of project documents and literature, and phone interviews will be conducted to attempt to document the factors. Correlations will be done between changes in the METT and biodiversity trends at the PA level to assess the extent to which METT scores are a reliable predictor of changes in biodiversity parameters.

d. **Assess relevance of GEF-supported sites to global priorities.** Spatial analyses of overlaps between GEF-supported PAs with Key Biodiversity Areas and/or Important Bird Areas and Global 200 Ecoregions will be done to assess the extent to which GEF is supporting areas relevant to global biodiversity priorities. On a regional scale, this will be done through comparisons with the Global Biodiversity Values assessment and locations of species on the IUCN Red List.

41. In the first stage, time constraints permit examination of only data from PAs with a GEF investment. Comparisons can only be made between the aggregate trend for the examined GEF-supported sites, and the aggregate global biodiversity trends and trends for non-GEF PAs. This limits explanatory power because there is a lack of counterfactual data from sites without a GEF investment.

42. The second stage of this analysis will focus on a quasi-experimental assessment of the impact of GEF support in protected areas, which will greatly strengthen the conclusion of project effectiveness. To do this, a counterfactual dataset will be constructed. Trends in biodiversity outcomes (population time-series data) at GEF-supported sites will be compared to sites selected for their similarity to project sites but that have not received GEF support[9]. A set of screening criteria will be developed to allow valid and defendable site-matching based on a database of 50 social, economic, geographical and ecological variables. This approach should allow for good attribution, assuming suitable matched counterfactual sites exist and have biodiversity data. Results of the second stage of the analysis will be presented with the final impact evaluation report in November 2014.

43. A potential third stage, which will be further designed during this evaluation, will involve long-term collaboration with the WCPA-SSC Joint Task Force, to capture site-level measures of management input, including management capacity, community interaction and detailed investment data. In addition to management inputs, other metrics of management success, specifically habitat conservation, will be given focus. The third stage aims to further test the result of previous analyses showing that site-based management is the most important predictor of conservation success, based on country-level data. The findings of the final impact evaluation report, including those from the third stage, are intended to be presented at the World Parks Congress in November 2014.

[9] Counterfactual sites will only be identified for PAs that were not created as a result of GEF support; otherwise, the counterfactual would be the absence of a PA.

The METT--GEF tracking tool for Catalyzing Sustainability of Protected Areas at National Levels

A site-Level Management Effectiveness Tracking Tool (METT) was developed in 2003 by the World Bank and the WWF Alliance for Forest Conservation and Sustainable Use for a joint forest management program (Stolton et al. 2003). GEF adopted it on a pilot basis during GEF 3 and has incorporated it as part of the Biodiversity focal area tracking tool. With some modifications made to include the most updated parameters, the METT recognizes that good protected area management is a process that includes several elements that merge into each other. It begins with understanding the context of existing values (such as important species and ecosystems supported) and threats to the site. On the basis of this context, a management plan is prepared and agreed through a process of consultation with all relevant stakeholders. On the basis of the management plan, the protected area management agency allocates the necessary resources. These inputs include staff, infrastructure, and other recurrent costs. These resources are applied to management actions (processes) eventually leading to products and services (outputs) that result in impacts or outcomes. Lessons are learned through research and monitoring, leading to a revision of the context and a new management plan every few years, as the process continues in a cyclical fashion and the management improves steadily over time.

The METT is accompanied by a data sheet for each site, which includes 30 questions, each with four possible answers with a score ranging from 0 to 3, so that each site can be given a score. However, it is recognized that this scoring approach has some important limitations: not all questions are relevant to all protected areas, some questions may have different weights in different situations, and many of the answers may be somewhat subjective. Still, the METT enables protected area management to answer a series of fundamental questions: Where are we now? Where do we want to be? What do we need to get there? How do we go about getting there? What were the results? What did we achieve? What did we learn? Where are we now? (after having gone through the process of answering these questions, which are then repeated on the basis of more effective management).

The World Commission on Protected Areas, which has expert members in virtually all countries, provides a framework for assessing management effectiveness at both site and system levels, and helps to harmonize protected area assessment among countries. It is generally acknowledged that the METT is most useful for comparisons of a site over time, or comparing sites within a country, because of the substantial differences between countries on expectations, resources, and needs. But some recent studies indicate that the METT is a reliable predictor of biodiversity conservation (Laurance et al. 2012, Burtzky et al. 2012). GEF tracking tools could thus also be useful sources of quantitative data, or at least qualitative information. GEF Secretariat-lead learning missions to Zambia (2010) and India (2012) examined the relationships between METT scores and biodiversity condition (see http://www.thegef.org/gef/BIO_results_learning). The missions identified useful lessons about using the METT, along with other data, to assess protected area management effectiveness. Further information on the METT, including detailed guidelines, is available at www.iucn.org/wcpa.

C. Assessing the contributions of GEF/UNDP support and factors affecting progress towards impact

44. The impacts of management activities on biodiversity are often likely to take place over a long time period, partly due to lags in the response of both the natural system and the socioeconomic system, but also because it takes time to put in place processes, structures and

behaviors that will result in improved management. Given the response lag time inherent in these systems, it is important to assess the extent to which the right conditions and processes are being put into place at present. The evaluation will also assess GEF contributions to put into place such conditions, and the extent to which these contributions triggered processes of broader adoption in such a way as to contribute to systemic changes. The projects to be included in this assessment will be those involving terrestrial protected areas and protected area systems from the 243 GEF biodiversity projects completed from 2000 to 2012. Data will be drawn from the database on progress towards impact of completed GEF projects that has been constructed from information in terminal evaluations, terminal evaluations reviews, ROtIs and field verification reports. The analysis will include three main components:

a. **Environmental and socioeconomic impacts of GEF projects.** This component will assess the scale and extent of environmental and socioeconomic change reported at project completion, in terms of reduced stress on terrestrial habitats and species, improved environmental status, and improvement or worsening of community livelihoods.

b. **Broader adoption of the outcomes of GEF projects.** This analysis will determine the extent to which GEF support has catalyzed broader adoption of the knowledge and information, governance instruments, and implementation strategies resulting from GEF projects at project completion and after GEF support. This analysis will assess the extent to which GEF support has provided foundations for broader adoption and country capacities to further improve management of biodiversity resources.

c. **Project-related and contextual factors affecting progress towards impact.** Linking the first two components, this assessment will examine which critical factors (internal and external to the projects) affect how project outputs and outcomes contribute to progress towards impact during implementation, as well as after completion. Subsequent field verification missions will also provide fresh evidence on the progress to broader adoption and on the conditions which support and hinder broader adoption. Contextual factors and specific approaches and types of interventions implemented by the projects, particularly those in relation to key elements of Objective 1 of the GEF Biodiversity Strategy and affecting community livelihoods, will be identified and assessed for correlations with the extent and scale of environmental and socioeconomic impacts and broader adoption at project completion. Similarly, biodiversity outcomes for PAs with time-series data (see section immediately above) will be analyzed for patterns of correlation with these contextual and project-related factors to triangulate the findings. This will show if certain contextual factors and elements of the GEF Biodiversity Strategy are more relevant than others in affecting the achievement of biodiversity management objectives. For example, investments in production landscapes around PAs is one approach used that may influence not only biodiversity impacts within PAs, but also attract other actors to invest in these landscapes. Once the most effective

approaches are identified based on the results, GEF-5 projects may then be assessed to determine if these approaches have been integrated into their design.

D. Assessing arrangements for biodiversity impact monitoring & reporting

45. In assessing data sources on environmental and socioeconomic impact, the evaluation will also assess the extent to which arrangements are in place for monitoring and reporting on impact at project design, during project implementation, and at project closure or, when possible, at the time the evaluation is being conducted. These may be done in collaboration with the GEF Scientific and Technical Advisory Panel (STAP) and concurrent GEF EO evaluations. Information for this assessment will also be derived from the database on progress towards impact of completed GEF projects that has been constructed from information in terminal evaluations and terminal evaluations reviews, and will therefore also cover projects involving terrestrial protected areas and protected area systems from the 243 GEF biodiversity projects completed from 2000 to 2012 (see section immediately above). To complement this analysis, an assessment will be made of the extent to which the METT provides useful information in a systematic manner across the GEF portfolio, and supports adaptive management of protected areas. An initial 343 projects have been identified as having submitted tracking tools.

E. Assessing socioeconomic factors enabling or hindering progress in biodiversity management

46. It is evident from the discussion above in the section pertaining to the role of people in protected areas that the global community of biodiversity practitioners has a keen interest in identifying the main factors enabling “win-win” scenarios, where successful habitat conservation and sustainable livelihoods are mutually reinforcing. There is also an interest in further understanding the conditions in which “trade-offs” take place, and to examine the role of the private sector when relevant. In this context, the evaluation will assess the relationship between a greater attention to livelihoods and land tenure, and enhanced species and habitat management. More specifically, the evaluation will seek to assess the extent to which and the conditions in which effective protected areas management is contingent on local community engagement.

47. One challenge the evaluation faces in this assessment is the lack of systematic and reliable information on this topic. The evaluation will explore the extent to which global databases contain the information needed to apply quasi-experimental analysis of this phenomenon. So far an initial assessment of such databases indicates that socioeconomic information is available at aggregate levels (country and province) and that information at the local level is spottier and less reliable. The evaluation will thus use these databases to the extent that data quality and scientific rigor permit.

48. The evaluation will conduct verification missions to a limited number of countries or protected area systems within countries with the main purpose of investigating the causal links between socioeconomic factors and impacts, and the extent to which biodiversity management efforts have been successful. That is, the verification will seek to assess the extent to which

improved environmental conditions may be attributed to socioeconomic factors and interventions and, conversely, the extent to which socioeconomic changes may be attributed to improved environmental conditions in protected areas. The sites will be selected on the basis of their contribution to meeting this specific purpose.

49. One approach under consideration is to integrate counterfactual analysis in field verifications by selecting a minimum of ten sites with conditions in which reasonably similar scenarios have resulted in widely different rates of progress to impact (either significant or nil). For example, the evaluation could narrow down the analysis by controlling for parameters for which there are reliable macro-level indicators, such as the country's stage of economic development and over-all governance, as independent variables to explain cases of significant broader adoption and cases in which there has been no progress or limited progress in the improvement of livelihoods and improvement of biodiversity management. Given the complexity and challenges related to this analysis and the time constraints facing the evaluation, if lack of available evidence precludes any reliable conclusions, the evaluation will propose an approach to develop the necessary rigorous evidence to draw reliable conclusions.

50. The verification missions will also be used to fill in gaps in the quasi-experimental analysis and assessment of progress towards impact, such as the extent to which reported impacts may be attributed to GEF/UNDP support. Of particular importance will be the documentation of the environmental and socioeconomic impact of GEF/UNDP support on local and indigenous people, and the extent to which the presence or absence of landscape management approaches have affected further progress in sound biodiversity management.

51. Verification missions will include site visits to protected areas, interviews and focus group discussions with community members, local park authorities, central government officials and other stakeholders, and a review of appropriate archival information.

F. Addressing methodological limitations

52. The main limitation of this evaluation is the availability of reliable time-series data on biological and socioeconomic parameters. This particularly limits the evaluation's ability to assess the impacts before and after GEF support, as well as to find comparable PAs with which to assess impacts with and without GEF support, taking into account the many confounding factors involved. This limitation will be addressed by triangulating findings from the analyses of four main information sources: 1) databases compiled by the WCPA-SSC Joint Task Force on Biodiversity and Protected Areas of the IUCN containing over 50 contextual variables (including surrounding land use, threats, and Gini coefficient), and 17,000 population time-series data points that have all undergone a quality control process and have metadata documentation. Any indexing of these data will use peer-reviewed standards adopted by the Living Planet Index, developed jointly by the Zoological Society of London (ZSL) and the Worldwide Fund for Nature (WWF); 2) terminal evaluations and terminal evaluation reviews will be used to assess progress towards impact at project completion; 3) The validity of data drawn from Management Effectiveness Tracking Tools will be assess as a proxi for impact and if deemed reliable will be

used to assess impact; and 4) case studies from field visits will be used to fill in information gaps and to verify causal links between GEF support and the observed changes. To supplement gaps at the portfolio level, a case study approach will be adopted in sites where comprehensive and reliable information is available in multiple forms. In addition, the evaluation team will be interacting with a Technical Advisory Group (see section on execution structure) and other biodiversity scientists throughout the evaluation to ensure the quality of the data, the appropriateness of the parameters and indicators used in each assessment, and the feasibility of the methodological approaches.

VII. Implementation Approach

53. As mentioned above, the evaluation will be implemented in two phases to provide timely information at key points in the GEF replenishment process.

Phase 1: April 2013 to August 2013

54. Phase 1 will focus on assessing the ecological impacts and progress towards impact in supported protected areas and protected area systems. Apart from measuring actual impact, critical considerations for biodiversity management and factors driving environmental and socioeconomic impacts will also be examined. It will likewise enquire broadly on the extent to which socioeconomic factors, specific GEF approaches and interventions, management effectiveness, and specific contextual factors are linked to species population trends and habitat cover.

55. Phase 1 will draw its findings primarily from the analyses of existing global databases, as described above, and desk reviews including the portfolio analysis of completed biodiversity projects and scientific literature reviews. The findings will be presented at the 6th Replenishment Meeting in September 2013 through the final OPS 5 report.

Phase 2: September 2013 to November 2014

56. Building on specific issues and methodological frameworks to be developed in Phase 1, Phase 2 will include an in-depth analysis of the factors and conditions contributing to impact, particularly focusing on the assessment of the factors enabling biodiversity conservation and sustainable livelihoods to be mutually reinforcing. This phase will also identify areas of mutual benefit, trade-offs and losses for biodiversity conservation and human welfare, and examine the factors that contribute to these different scenarios. The status and impact of alternative livelihoods supported by GEF projects will be given particular attention. During this phase the evaluation will also further assess the extent to which biodiversity outcomes at the local scale may be attributed to GEF support through the identification of counterfactuals. It will further refine the assessment of impact by comparing different strategies for community engagement, and also comparing against sites that have not received GEF support. Phase 2 will draw case studies that will include field visits, and when available will draw on information from global

databases. The findings will be presented at the GEF Council Meeting in November 2014, and at the UNDP Executive Board Meeting in January, 2015.

VIII. Knowledge management and stakeholder involvement

57. The approach paper was circulated for comments among internal and external GEF stakeholders, including the GEF Secretariat, UNDP Staff and the staff of other GEF Agencies, STAP and technical experts. The paper will be posted in the GEF and the UNDP Evaluation Office websites for comments and will also be sent to specific individuals outside the GEF for comments and feedback.

58. The main purpose of this evaluation is to provide inputs to OPS5, and through it to the sixth replenishment of the GEF trust fund, and to provide evidence and lessons to help improve GEF support to protected areas and protected area systems. As such, key audiences are the GEF Council, the replenishment group, the GEF Secretariat and the GEF Agencies. In parallel, the evaluation aims to provide the UNDP Executive Board, UNDP management and partner governments with evidence and lessons on GEF/UNDP support to protected areas, paying special attention to the human development focus of UNDP. The evaluation will thus produce a report that addresses the extent of GEF impact through the biodiversity focal area and GEF contributions to biodiversity management, while addressing also the poverty-environment nexus of issues that are central to UNDP engagement. The evaluation will also provide recommendations referring to strategies and approaches pursued by GEF/UNDP. In addition to these, the evaluation will seek to assess the extent to which follow-up actions are needed, focusing not just on GEF but also on other important actors such as governments, civil society, local communities and project managers. As appropriate, the findings of the evaluation will be packaged in brief write-ups, webinars, videos or blog posts to reach the intended audiences.

IX. Evaluation execution structure

59. The evaluation will be jointly carried out by the GEF Evaluation Office and UNDP Evaluation Office. The execution structure of the evaluation will be composed of three tiers:

a. The Steering Committee will review the approach paper and recommend approval to the two Directors, review joint management arrangements, hiring of senior consultants, and the evaluation report. It will ensure that sufficient and timely resources (human and financial) are made available for the evaluation. The Steering Committee will hold a formal meeting with GEF Agency representatives and stakeholders to discuss the emerging findings of the evaluation. This Committee will also function to review and resolve disputes if they arise.

b. The Management Team will be responsible for the over-all development and execution of the evaluation. This team will be responsible for the identification, hiring and supervision of consultants in accordance to mutually agreed TORs and institutional

procedures; coordination of evaluation activities carried out by both Offices, quality control of products and processes; and the timely delivery of evaluation products.

c. The GEF and UNDP evaluation offices will collaborate with the WCPA-SSC Joint Task Force on Biodiversity and Protected Areas of the IUCN, which is carrying out a global study on PA effectiveness. The Joint Task Force has compiled the most complete datasets on biodiversity metrics in protected areas. This includes databases on PA species population time series, contextual variables, and management effectiveness tracking. Evaluators from both offices will also participate in field visits of their respective operations and will carry out specific tasks as directed by the management team.

60. The Directors of GEF EO and UNDP EO, Rob D. van den Berg and Indran Naidoo, are the co-chairs of the Steering Committee. The Management Team is composed of Aaron Zazueta, Chief Evaluation Officer of GEF EO and Alan Fox, Evaluation Advisor of UNDP EO; they are members of the Steering Committee. Further members of the Steering Committee are Oscar Garcia of UNDP EO and Anna Viggh of GEF EO.

61. In addition, a Technical Advisory Group (TAG) comprised of at least one biodiversity management expert and one evaluation expert (to be invited from the two GEF agencies with a high number of biodiversity projects) will be formed to provide inputs and feedback on the evaluation as it progresses. The main roles of the TAG will be to provide advisory support and guidance on the evaluation approach and other methodological issues, scientific and technical issues, identification of existing data sources, and facilitation of contact with relevant research institutions. The TAG will be convened by the Management Team. TAG members will specifically be asked to comment on the approach paper, participate in meetings to review preliminary findings, and comment on the draft and final report.

X. Timeline of the evaluation [First phase, March to August 2013] [Timeline for phase two to be developed]

Feb 28	Definition of reach of quasi-experimental analysis
Mar 30	Preliminary results of quasi- experimental & Meta evaluation analysis
Jun 24	Finalization and Approval of Approach Paper
July 29	Meeting to review evidence and emerging findings
Aug 31	First draft of report / circulation among stakeholders
Sep 30	Conclusions and Recommendations
Oct	Finalization of report

Annex 1. Key Elements of GEF 5 Biodiversity Focal Area Strategy Objective 1

There are five major objectives in the GEF 5 Biodiversity Strategy:

- Improve the Sustainability of Protected Areas Systems
- Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes/Seascapes and Sectors
- Build Capacity to Implement the Cartagena Protocol on Biosafety
- Build Capacity on Access to Genetic Resources and Benefit Sharing
- Integrate CBD Obligations into National Planning Processes through Enabling Activities

This evaluation will focus on the first. The first objective (BD-1) identifies three main challenges to the effectiveness of protected areas:
a) Financing: Reductions of public sector funding for PAs threaten their sustainability.
b) Management: Decline of long-term individual and institutional management capacity threatens PA effectiveness.
c) Priorities: Current protected areas feature global representation gaps, leaving biodiversity of global value vulnerable.

Financing of protected areas

BD-1 aims to improve the financial sustainability of protected area systems by establishing new incentive structures and corresponding financial mechanisms for investments in PAs. Activities envision increasing investments by public as well as private sector actors. The BD strategy supports activities to provide the legal and regulatory basis for new financing and incentive structures. These are embedded in broader efforts to develop and improve the national policy, legal and regulatory framework on protected areas. Improvements of the policy environment have the explicit goal "to engage the private sector and other stakeholders to improve protected area financial sustainability". Furthermore, the legal basis is connected to the development of the necessary capacity for the implementation of new financial mechanisms within relevant institutions, administrative entities and individuals. Related capacity and skill development is in particular geared towards leveraging the potential commercial opportunities of PAs to mobilize private sector investment. BD-1 states that protected area agencies are "often ill-equipped to respond to the commercial opportunities that protected areas provide", representing a barrier for the implementation of financing mechanisms that are based on the adequate valuation of ecosystem services.

The combination of legal and regulatory stipulations and capacity development is intended to facilitate the establishment and implementation of financing mechanisms and incentives for public and private PA financing. The BD strategy explicitly identifies conservation trust funds (instrument for public-private partnerships), payments for ecosystems services (private sector engagement) and debt-for-nature swaps (channel for multilateral public funding) as examples for financing mechanisms to be supported under BD-1. In sum, the causal chain toward PA financial sustainability is to a certain extent based on the assumption that the PA's commercial

opportunities are sizeable and possible to transfer into economic profits, providing an incentive for private actors to increase PA investments.

Enhancement of management

The second way to improve sustainability and impact of protected areas addressed by BD-1 is the long-term capacity to manage PAs. BD-1 supports capacity development, knowledge creation and information-sharing on national and local levels. Improved capacity in turn is intended to facilitate the ongoing development and improvement of PA management systems, ultimately increasing biodiversity impacts from protected areas. In this context, the Biodiversity focal area strategy highlights two aspects:

a) Indigenous communities: BD-1 assumes that indigenous communities play a major role with respect to PAs and, if included in PA management, can be a significant asset for PA sustainability. The strategy points to indigenous and community conserved areas (ICCAs) as a positive example.[10]
b) Climate resilience: BD-1 points to the threat climate change poses to the sustainability of impacts from protected areas and the challenge to integrate "adaptation and resilience management measures as part of protected area management projects".

PA expansion and prioritization of representation gaps

Enabled by the mobilization of additional investment, building on reforms of the national policy framework, and complemented by the improvement of management systems, BD-1 envisions direct GEF support to the creation and expansion of protected areas. In this context, the Biodiversity focal area strategy highlights the continued existence of global representation gaps. Based on the assumption that closing these gaps is an effective way to improve BD sustainability, BD-1 defines clear priorities for coverage to be emphasized by new protected areas receiving GEF support:

a) Marine ecosystem representation through coastal and near shore protected area networks;
b) Terrestrial and inland water ecosystem representation;
c) Landraces and wild crop relatives of species of economic importance;
d) Threatened species.

[10] The importance of cooperation with indigenous communities is also highlighted in the GEF's "Indigenous Communities and Biodiversity" report of 2008 and included in other documentation such as the "Financing the Stewardship of Global Biodiversity" report.

Annex 2. The IUCN System of Management Categories for Protected Areas

The IUCN system of management categories is intended to provide a global standard for defining, recording and classifying protected areas and the wide variety of specific aims they might embody. The categories are based upon the management objectives of a protected area. They can encourage governments to develop systems of protected areas with management aims tailored to national and local circumstances, while establishing a universal terminology that can facilitate global and regional accounting and comparisons between countries. The system also provides a framework for the collection, handling and dissemination of data about protected areas, thereby communication and understanding among those engaged in the conservation of protected areas. This box contains an abridged version of the terrestrial elements of the system, with full details available from Dudley (2008).

Category Ia. Strict Nature Reserves

Strict Nature Reserves are protected from all but light human use in order to preserve all geological features of the region and their biodiversity. Use is often restricted exclusively to scientific monitoring, study or education. Strict Nature Reserves can be used as an indicator of external human influence, though climate and air pollution can penetrate protected area boundaries. When Strict Nature Reserves are of spiritual significance to surrounding communities, the people are generally allowed to continue the practice of their faith and may be directly involved in the area's conservation and management objectives, though perpetual human intervention would more suitably be allocated to categories IV or V.

Category Ib. Wilderness Areas

Generally larger than Strict Nature Reserves, the main objective of these areas is to provide an environment in which biodiversity and ecosystem processes (including evolution) are allowed to flourish or be restored if previously disturbed by human activity. Human use is limited, often allowing only those who are willing to travel of their own accord rather than via established touristic activities. Wilderness areas are devoid of modern infrastructure, although they allow human activity to the level of sustaining indigenous groups living wilderness-based lifestyles.

Category II. National Parks

National Parks provide protection for functioning ecosystems, but tend to be more lenient with human visitation and the supporting infrastructure. National Parks are managed in a way that may contribute to local economies through promoting educational and recreational tourism on a scale that will not reduce the effectiveness of conservation efforts. Areas surrounding a National Park may allow consumptive or non-consumptive use, but should help enable the protected area's native species and communities to remain sustainable in the long term.

Category III: Natural Monuments or Features

These are comparatively smaller areas that are specifically allocated to protect a natural monument and its surrounding habitats. They may include elements that have been influenced or introduced by humans. Natural monuments may support biodiversity that is uniquely related to the conditions of the natural feature, or contain current levels of biodiversity that are dependent on the presence of the sacred sites that have created an essentially modified ecosystem. Natural Monuments often have high cultural or spiritual values that gain strong support from local people.

Category IV: Habitat/Species Management Areas

Such areas are linked to an identifiable species or habitat that requires continuous protection. They are managed to ensure the maintenance, conservation and restoration of particular species and habitats - possibly through traditional means - and public education of such areas is widely encouraged as part of the management objectives. They may be designated as a fraction of a wider landscape or protected area and may require varying levels of active intervention including - but not limited to - the prevention of poaching, creation of artificial habitats, halting natural succession and supplementary feeding practices.

Category V: Protected Landscapes

Protected Landscapes cover extensive areas that allow a range of for-profit activities within the management plan. The main management objective is to safeguard regions that have built up a 'distinct character' in regards to their ecological, biological, cultural or scenic value. They allow a higher level of sustainable interaction with surrounding communities (such as traditional agricultural and forestry systems) and should represent an integral balance between people and nature. They may be able to accommodate contemporary developments such as ecotourism while maintaining historical agrobiodiversity and aquatic biodiversity management practices.

Category VI: Protected areas with sustainable use of natural resources

These areas are based on a mutually beneficial relationship between nature conservation and the sustainable management of natural resources to support the livelihoods of surrounding communities. Many socio-economic factors are taken into consideration in creating local, regional and national approaches to the use of natural resources. Though human involvement is a large factor in the management of these protected areas, large-scale industrial production is not envisaged. These landscapes already have a low level of human occupation that has had little or no negative impact on the environmental health of the region. The proportion of the land that is expected to remain in its natural condition is typically specific to the protected area, with management adapted to the diverse and possibly growing range of interests that arise

from the production of sustainable natural resources. Many such areas are managed by local communities, and the percentage of such areas is increasing on a global scale (Borrell 2012).

Annex 3. Protected Areas in the United Nations Convention on Biological Diversity

Beginning in the 1980s, governments began discussing a more comprehensive convention, to address all of life, from genes to ecosystems (using the phrase "biological diversity" as the inclusive unifying term). Following several years of discussion, a Convention on Biological Diversity (CBD) was signed by 150 countries at the Rio de Janeiro Earth Summit in 1992. The CBD entered into force in December 1993 and now has 192 State Parties, plus the European Union, indicating very broad support for the CBD's objectives. A recent global synthesis has confirmed that biodiversity loss is a major driver of ecosystem change (Hooper et al., 2012), justifying the continuing role of the GEF as the financial mechanism for the CBD.

While the CBD is comprehensive, it specifically calls on parties to establish well-managed systems of protected areas as a primary means of helping to conserve biological diversity, a global public good. In its Article 8, the CBD calls on each of its Contracting Parties, "as far as possible and as appropriate" to:

(a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
(b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;
(c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to assuring their conservation and sustainable use;
(d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;
(e) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;
(j) Subject to its national legislation, respect, preserve, and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations, and practices;
(k) Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations;
(m) Cooperate in providing financial and other support for in-situ conservation,…particularly to developing countries.

Annex 4. Framework for GEF Theory of Change (January 2013)

The general framework for the GEF Theory of Change (TOC) draws on the large amount of evaluative evidence gathered over the years by the GEF Evaluation Office. The GEF TOC framework is being adopted by the Evaluation Office as an exploratory tool to help understand the causal pathways between GEF support and the generation of global environmental benefits (GEBs) within the particular external contexts that different forms of GEF support take place in. Acknowledging that GEF support takes place at local, national, regional and global scales, the framework is seen to be applicable at any scale of intervention. The GEF TOC framework helps to:

1) Classify and link the results of GEF-supported initiatives within a causality chain leading to GEBs, and assess these contributions with consideration of the mismatched temporal, ecological and administrative scales of interventions and intended GEBs;
2) Assess the extent of GEF contribution to progress towards GEBs by analyzing the results of GEF support in the context of other actors' contributions; and
3) Identify constraints on further GEF contributions to progress towards GEBs.

The GEF TOC framework is a tool for the identification and classification of the elements of GEF support, and their causal relationships as envisioned in GEF strategies. It is not meant to be a standard against which GEF activities are to be measured.

1. Areas of contribution of GEF support

GEF support is typically concentrated in activities that directly or indirectly contribute to the improvement of environmental status and/or address drivers of environmental degradation. Based on past evaluative evidence, the framework classifies the contributions of GEF support into three main categories:

a) Knowledge & information, covering activities that promote the generation and dissemination of data, information, knowledge and skills necessary for environment-related decision-making and management. These include research studies, publications and websites, information and knowledge management systems, awareness-raising campaigns, conferences and learning networks, training in technical skills, and monitoring and reporting of environmental and socioeconomic status.

b) Institutional capacity, encompassing support for the development and formulation of policy, legal and regulatory frameworks at the appropriate scales of intervention, and for the creation and the improvement of necessary governmental structures and processes to implement these frameworks. This category also includes support for the often informal mechanisms for trust-building and conflict resolution, including processes that enable the participation of a larger spectrum of stakeholders in environmental initiatives. Examples of these mechanisms may be conferences and meetings that promote dialogue and collaboration, or actual dispute resolution processes.

c) Implementation strategies, covering a broad range of activities that serve as the means to implement environmental initiatives that directly contribute to environmental stress reduction and/or improved environmental status. These include innovations in infrastructure, engineering and other investments in physical assets, sustainable management approaches and methodologies, and the financing mechanisms and organizational arrangements necessary to implement these technologies and approaches. This category usually entails the testing and demonstration of these technologies and approaches in preparation for broader deployment of proven strategies.

Changes directly linked to GEF contributions are typically referred to as GEF outputs and outcomes. To produce the envisioned outputs and outcomes, the different elements within a GEF project contributing to these three areas are often designed to complement and reinforce each other, as well as the results of the contributions of other actors. These elements may also be put in place at different scales, across which they interact. The identification and illustration of these elements and their reciprocal relationships is one of the functions of the GEF TOC framework. Collectively, these elements are intended to result in immediate environmental impact, or more gradually to contribute to progress towards impact.

2. Context and role of GEF support

Each GEF-supported initiative takes place in a specific context and has to be understood in relation to a broad range of contextual factors. GEF projects are usually conducted within the context of previous and ongoing initiatives carried out in part by non-GEF actors, including national and local governments, international organizations, and non-government stakeholders such as civil society organizations (CSOs) and the private sector. GEF projects are therefore often closely interwoven with, building on, or supplementing actions and contributions of other actors. In many cases, GEF support serves as an avenue to facilitate and coordinate interactions among non-GEF actors, helping to improve the coherence of their contributions. More specifically, previous evaluations have assessed that GEF support often functions through specific mechanisms that, while not present in all instances, do appear to be recurrent. These include:

a) Promoting champions - developing capacities of existing leaders to eventually take on more prominent roles, and consequently advocate GEF-supported technologies and approaches in other arenas (note: capacities refers to leadership capacities/ opportunities rather than specific skills)
b) Building on promising initiatives - supporting components of existing initiatives that might otherwise not be supported by the original non-GEF funding sources
c) Raising profile of initiatives - attracting new cofinancing (in addition to the cofinancing identified in original project document), implementation priority, and other forms of stakeholder support from government and other stakeholders for existing initiatives

d) Removal of barriers - supporting components that enable the removal of specific obstacles that have blocked further progress, or that have prevented existing initiatives from moving forward
e) Accelerating innovation - introducing or supporting new elements or concepts into existing management regimes (often already tested elsewhere by other actors), and in this way dealing with the inherent risks and speeding up the adoption of these innovative elements that contribute to global environmental benefits that countries themselves may otherwise implement much later.

In addition, GEF-supported initiatives are implemented under different political, cultural and socioeconomic conditions at the local, national and regional scales that significantly influence the implementation and outcomes of each initiative. The role of GEF support is thus dependent on past, present and also future contextual factors across multiple geographical and administrative scales that are largely outside of GEF control. By disaggregating GEF support into its different components, the GEF TOC framework helps to assess the ways and the extent to which GEF support interacts with contextual factors to achieve progress towards intended impacts.

3. Progress towards impact

Long-term intervention across a wide geographical area is typically required for global environmental benefits to be achieved. Beyond the results that are directly linked to GEF contributions, GEF support seeks to contribute to the achievement of impact by catalyzing action among the different stakeholders, using mainly their own resources. Progress towards impact is usually evident in two forms: broader adoption of GEF-supported implementing strategies, and behavioral change among stakeholders. The framework assumes neither a strictly linear progression from the direct results of GEF contributions to their broader adoption, nor a clear line of division between GEF contributions and progress towards impact. Instead, the GEF TOC framework illustrates a dynamic system of simultaneous, cyclical causal relationships requiring and resulting from adaptive management.

Broader adoption often, but not always, takes place beyond the scope of implementation of the GEF project itself. Broader adoption by other actors may already occur during project implementation, and in some cases is integrated with the design of the GEF-supported initiative. For other initiatives, despite highly successful project outcomes, broader adoption may be insignificant until certain catalytic conditions take place at the right time in the larger context. In any case, the GEF TOC framework helps direct attention towards the analysis of the extent to which broader adoption takes place after the closing of a GEF project--whether facilitated by GEF-supported follow-up activities, or primarily driven and shaped by non-GEF actors.

There are multiple processes by which broader adoption by project stakeholders occurs beyond the limits of direct GEF influence. These processes can be classified into five general categories that are often observed in connection with GEF-supported initiatives:

a) Sustaining: Benefits resulting from GEF-supported outputs and outcomes continue after GEF support ends. This framework assumes that the specific technologies or approaches supported through GEF will be transform or in some cases become obsolete as time goes by and as in the context of changing needs and circumstances. Nevertheless, in the short- and medium-term, the persistence of some of the approaches supported through GEF would be necessary to ensure the continuation or increase of benefits. In the case of institutional mechanisms, this may imply budget allocations, operational implementing structures, and institutional and legal frameworks.

b) Mainstreaming: Information, lessons, or specific results of GEF are incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations, programs. This may occur not only through governments but also in development organizations and other sectors.

c) Replication: GEF-supported initiatives are reproduced or adopted at a comparable administrative or ecological scale, often in another geographical area or region.

d) Scaling-up: GEF-supported initiatives are implemented at larger geographical scale, often expanded to include new aspects or concerns that may be political, administrative or ecological in nature. This allows concerns that cannot be resolved at lower scales to be addressed, and promotes the spread of GEF contributions to areas contiguous to the original project site.

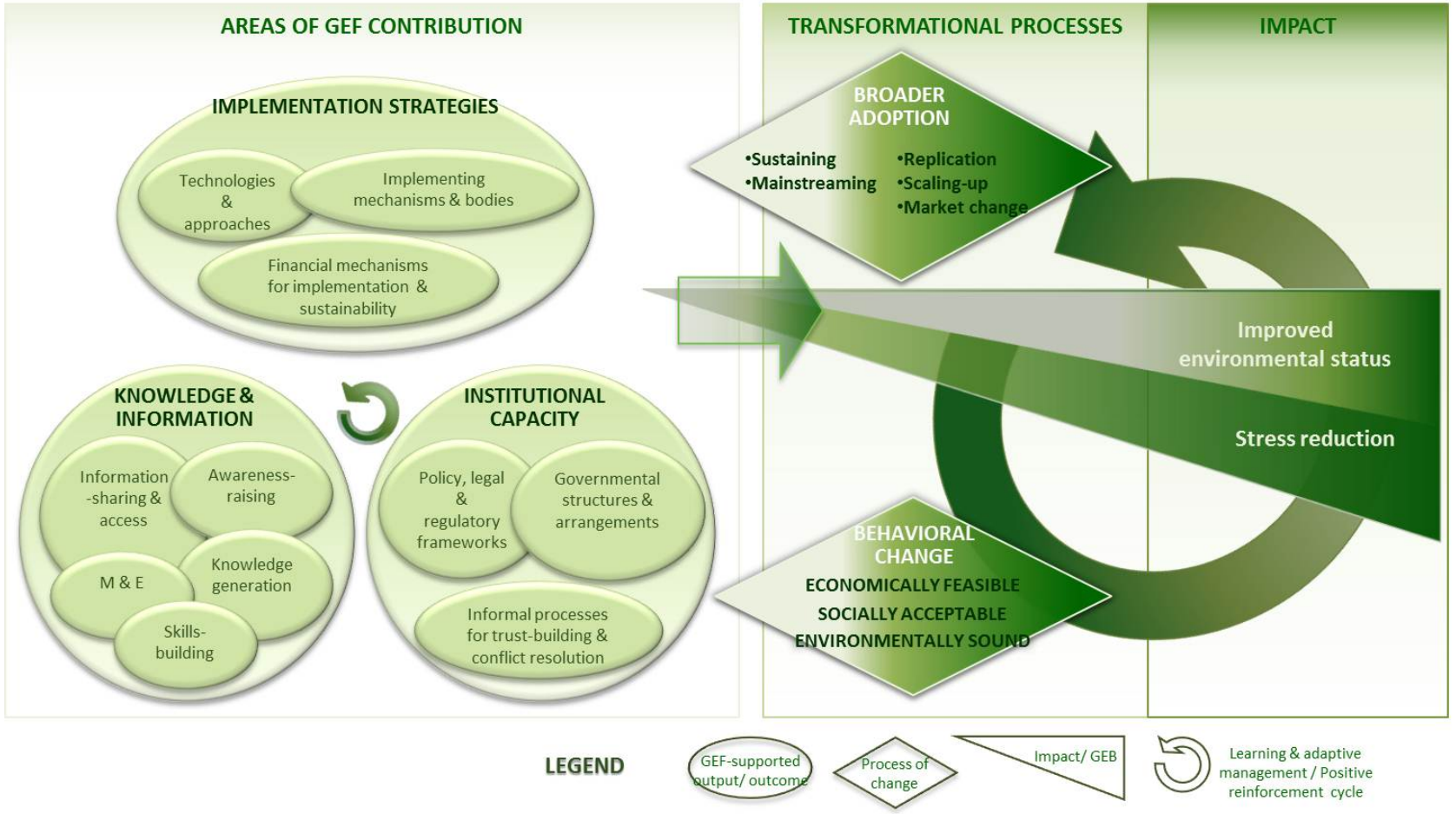
e) Market change: GEF-supported initiatives catalyze market transformation by influencing the supply of and/or demand for goods and services that contribute to global environmental benefits. This may encompass technological changes, policy and regulatory reforms, and financial instruments.

These five processes of broader adoption may be at work in any combination at the same time for a given project, and may take place simultaneously at different spatial and temporal scales, in different degrees of intensity and importance; often, one process may have to occur for another process to take place.

GEF contributions may also directly or indirectly lead to behavioral change, which in this framework refers to sustained and significant changes in stakeholder choices towards more environment-friendly actions. These stakeholders include not only a critical mass of individuals or local communities, but also policymakers and sectors that drive changes in environmental status. These choices are therefore likely to be political, economic and social in nature. The TOC framework calls attention to the assessment of the extent to which there is a positive reinforcing cycle between broader adoption and behavioral change, i.e. how broader adoption

leads to widespread behavioral change, which in turn further increases activities of broader adoption. The TOC framework also takes into consideration contextual conditions as well as factors internal to GEF that favor and hamper progress towards impact, especially broader adoption. For example, mismatches in the ecological and administrative scales of GEF-supported interventions and the areas of broader adoption may occur and need to be addressed.

General Framework for GEF Theory of Change

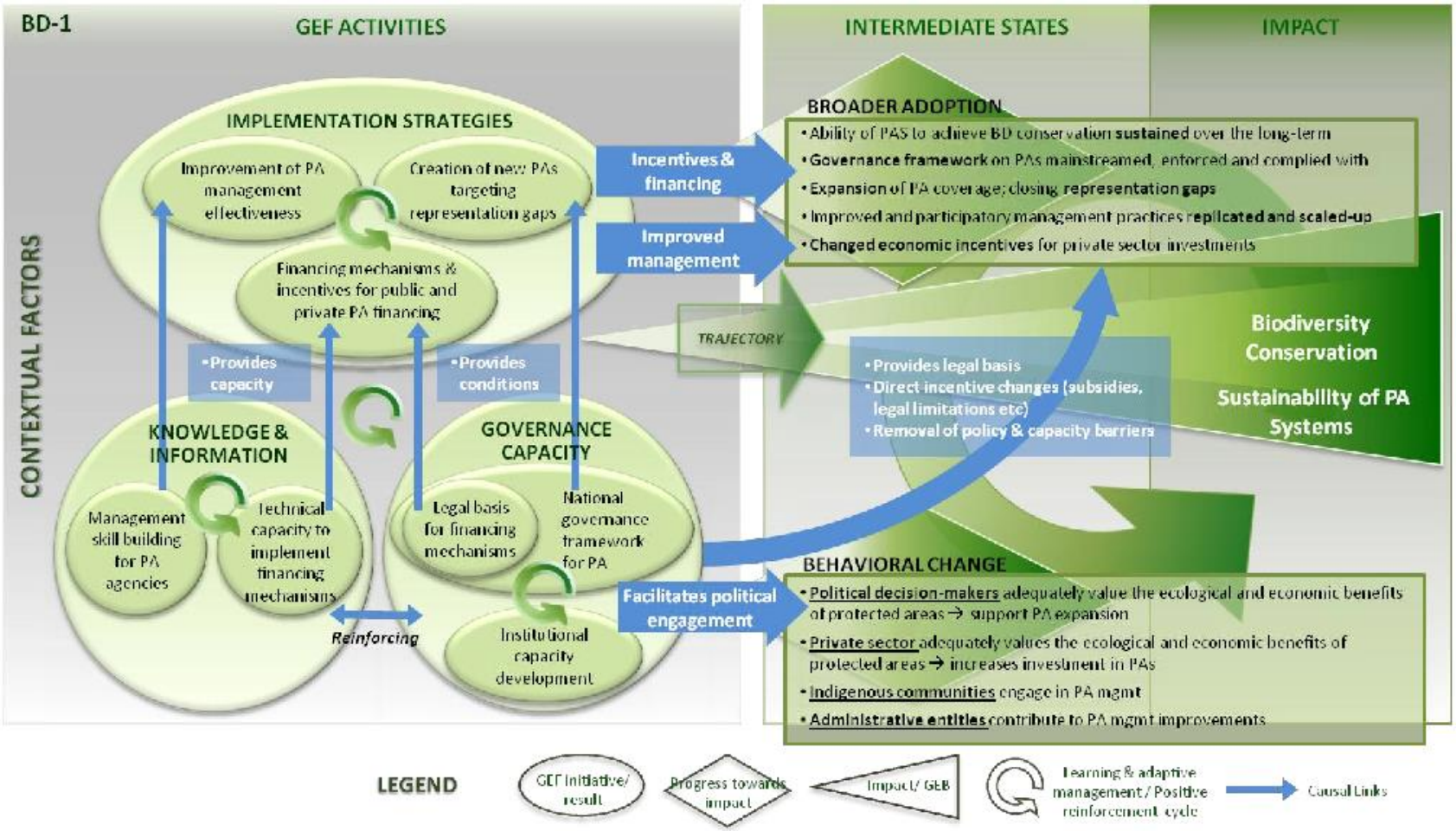


4. Impact of GEF support

GEF contributions are primarily geared towards transformational changes with respect to the environment. Impact, or the achievement of GEBs, is measured in two ways: stress reduction and improved environmental status. Stress reduction is the decrease, prevention or slowdown of the degradation, destruction or contamination of the environment. GEF-supported initiatives may or may not result directly in the reduction of environmental stressors during a project's lifetime. In any case, GEF support is expected contribute to continued stress reduction, eventually leading to improved environmental status. Improved environmental status refers to positive changes in the state of the ecosystem or any of its components. Due to the complex characteristics of the targeted ecosystems, changes in environmental status may take place at temporal and spatial scales that are disproportionate to the scale of GEF contributions. Both stress reduction and improved environmental status are expected to positively reinforce broader adoption and behavioral change in a cyclical causal relationship, progressively resulting in impact at higher scales over time.

In order to be sustainable, however, behavioral changes in terms of the environment need to be embedded in and compatible with the broader economic and societal context. Desired changes need to be economically feasible, socially acceptable, and aligned with stakeholders' basic values. Consequently, the GEF TOC framework also contemplates the assessment of the extent to which processes supported and/or initiated by GEF bring about development approaches that meet people's economic and social needs, while at the same time improving environmental status.

Annex 5. TOC of the GEF Biodiversity Strategy Objective 1: Improve sustainability of protected area systems



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